



# INYO COUNTY YUCCA MOUNTAIN REPOSITORY ASSESSMENT OFFICE

Task 3.3.2.1

## Highway 127 Traffic Study

### Introduction

The proposed high-level radioactive waste repository at Yucca Mountain, Nevada has the potential to create transportation related impacts, both through the eventual transportation of waste, and through shipments of materials during repository construction and operation. In fact, site characterization activities will themselves increase traffic, and its associated impacts, on Highway 127. Such impacts will occur both in the communities that are served by the highway, and in potential changes in tourism traffic to neighboring destinations. It is the responsibility of the Inyo County Yucca Mountain Repository Assessment Office to perform studies, develop monitoring systems, and ultimately prepare an impact assessment and request for impact assistance based on the potential impacts that have been identified.

The California Department of Transportation (Caltrans) is responsible for current infrastructure maintenance and future infrastructure improvements on the state transportation system. It is also the responsibility of Caltrans to conduct long-range multi-modal infrastructure planning for the California transportation system. Through a Memorandum of Understanding dated May 25, 1993 between the County of Inyo and the State of California Department of Transportation, the County and Caltrans have agreed to the need for and benefit of cooperative efforts in developing a baseline of information about existing transportation system conditions in the areas likely to be impacted by transportation to a repository at Yucca Mountain. This traffic study will be a joint effort between the County and Caltrans to develop needed baseline information on the traffic volumes, flow patterns, vehicular mix, and the hazardous materials component of current highway traffic on Highway 127 in Inyo County. This State Highway has been identified by the State of Nevada as a potential link in the route network being proposed as preferred alternative routes under federal law and regulations (HM-164). The designated California agency for routing of hazardous materials, the California Highway Patrol, is currently in the process of developing proposed alternative routes.

3/18  
10 24 P.02  
24 Edition

## Purpose

Before potential transportation system impacts to the communities served by Highway 127 can be addressed, it is essential to have an understanding of the current baseline traffic conditions. This study will be designed to examine the traffic volumes, flow patterns, vehicular mix, and the hazardous materials component of current highway traffic. As other agencies and organizations have an interest in the data collected, advice and assistance will be requested from such groups as the Death Valley Chamber of Commerce and the Death Valley National Monument.

## Methodology

1. **1989 Study** This study effort will be modeled upon the successful 1989 Inyo and Mono County Recreation and Travel Study, with adjustments made for the program's specific data needs. The '89 study involved personal interviews with vehicle occupants at the major points of entry to Inyo and Mono Counties along the Highway 395 corridor. The summer survey was conducted on a neutral August mid-week day and the following Friday and Saturday. The winter survey was conducted on a neutral February mid-week day and the following Friday and Saturday of the President's Holiday weekend. The hours of the survey (8:00 a.m. to 5:00 p.m.) represented about 50% of the total 24 hour traffic at each location. The following questions were asked:

1. How many in vehicle?,
2. Type of vehicle - classification,
3. Location of residence,
4. Purpose of trip,
5. Will you be staying in Inyo or Mono County?,
6. If yes, at what type of facility?

Trucks and buses were also included in the survey and these questions were posed to the drivers. The total number of vehicles surveyed was 16, 761.

2. **Survey Instrument Changes** As the proposed survey focuses not on recreation, but primarily on traffic volumes and mix, there have been adjustments made to the interviewer log sheet used in the prior study. The survey form developed for this task is included as "Attachment A". Some questions from the 1989 survey have been included to allow comparison to prior data collection efforts.
3. **Interview Locations** Preliminary interview sites are designed to capture all inbound traffic to the area highway network. Station One (east of the junction of 127 and 178 eastbound, on the north side of 178) is designed to capture all west-bound traffic from 178. Station Two (south of the junction of 127 and 178, on the east side of 127) is designed to capture all north bound traffic on 127. Station Three (west of the junction of 127 and 190, on the south side of 190) will capture east-bound traffic on 190,

Station Four (north of the junction of 127 and 190, on the west side of 127) will capture south-bound traffic on 127 and Station Five (east of 127, on the north side of the Pahrump "Stateline" road) will capture west-bound traffic on the Stateline road. Figure One shows the general location of these stations.

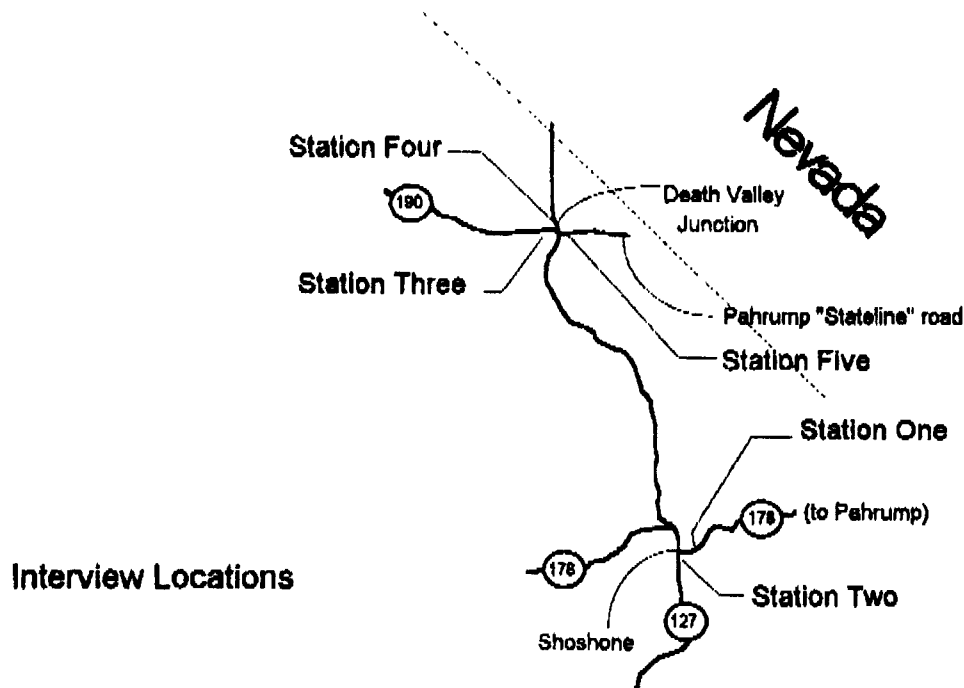


Figure 1

**4. Additional Vehicle Counts** The data collected would be of greater utility if all five interview locations were operated continuously throughout the five days. Realistically, the same essential data can be collected by mechanical counts of vehicles in conjunction with interview data collected for one day at each interview station (each on a different day). In order to capture full twenty-four hour counts, Caltrans will use traffic counters at seven locations - the five interview stations, highway 127 North (post mile 16.83), and highway 178 West (post mile 42.86). These counters will operate for a full seven day period, including the interview days. Caltrans will collect and tabulate this data. In order to verify the extrapolation of vehicle classification from a nine hour period to a twenty-four hour period, classification information will be collected at Station Two from the closing of the interview station until the next morning. Caltrans will provide a manual classification count board for this purpose.

**5. Location Equipment and Staffing** Interviews will be taken at each station for one day each for five consecutive days. This will allow one crew to cover all five stations, with the traffic counters providing data for additional analysis. Traffic control equipment, including a message board, hard hats, orange vests and traffic control equipment (cones, etc.) will be provided by Caltrans. Caltrans will also provide the flag personnel, and one oversight staff person. Supervisory staff and interviewers will be provided by the Yucca

Mountain Repository Assessment Office (RAO). One supervisor, flag personnel and three interviewers will provide sufficient personnel to allow for breaks, lunch, etc. The RAO will supply a recreational vehicle to be stationed at the interview location, to provide restroom facilities, cold water, a rest area, etc. In addition, the California Highway Patrol will be asked to provide a law enforcement presence at the interview location. The Inyo County Sheriff's Department, and the Death Valley National Monument will be advised of our operations. Caltrans records indicate that a nine hour count period during daylight hours (0800 to 1700) will capture the majority of the traffic flow through this system.

**6. Survey Dates** The need to capture peak and off-peak traffic flows will require two winter counts. The first will be from March 25 to March 29, 1994, in order to capture the peak Easter flows. March 24 will be used for interviewer training. The survey locations will be staffed on the following dates:

<u>Survey Location</u>	<u>Day</u>	<u>Date</u>
Station Five	Friday	March 25
Station One	Saturday	March 26
Station Two	Sunday	March 27
Station Three	Monday	March 28
Station Four	Tuesday	March 29

Caltrans will collect traffic counts for this survey from March 23 through March 30. The second interview period, designed to capture off-peak traffic volumes, will be held from May 14 through May 17. Caltrans will capture Traffic counts at the seven stations (see # 4 above) from midnight May 11 to midnight May 18, 1994.

# Memorandum

To : Jay Smart, Lloyd Hopper, Jerry Gabriel, Jerry Waters, Date : March 2, 1994  
Jeff Frederiksen, Ray Van De Weerd, Jack Bell, Joe Linzner File : Rte 127

From : DEPARTMENT OF TRANSPORTATION  
Transportation Planning

Subject : Highway 127 Traffic Study

Attached are the "final" Traffic Study process, plan, and questionnaire. After conducting preliminary traffic counts on Pahrump Stateline Road, we decided to add a fifth day for interviewing at this location. So now we will be interviewing from Friday, March 25 through Tuesday, March 29, 1994. See attached pages 3 and 4 for specific locations and dates.

Please use Planning's E.A. 609312, Special Designation 6305 with your own unit and activity codes. All time, straight as well as overtime, TEC, and equipment charges may be charged to this E.A. Please be as frugal as possible as it is not unlimited.

I personally appreciate all your individual input, expert help and enthusiasm. It has only been through your wonderful cooperation that this project will be successful. Thank you for your support, and I look forward to working with you during the surveys. If you have any questions or further suggestions please give me a call at extension 691.

Sincerely,



F. K. WALTON, Chief  
Transportation Planning & Public Transportation

## Attachments

cc: Lew Wood  
Ken Deboy  
Tom Beggs

HIGHWAY 127 TRAFFIC STUDY

Date \_\_\_\_\_ Station 1 2 3 4 5

Time 7 8 9 10 11 12 13 14 15 16 17 18

"Good morning/ afternoon.  
We are conducting a traffic study to determine where  
the people are traveling to and from along this highway.  
This will only take a few moments of your time."

Recorder A B C D E F G H I J K L M

						TRUCKS ONLY:						
Determine how many people in vehicle	Determine type of vehicle	"What City & State do you live in?"	"What City are you traveling from today?"	"What is the main purpose of this trip?"	"Are you staying in Inyo County?"	If, Yes: "What type of lodging?"	"& How long?"	"What city are you going to today?"	"What type of facility are you hauling to?"	"What are you hauling?"	"What is your laden weight?"	"I need to get the information from your Hazmat Placard."
<input type="checkbox"/> 1 <input type="checkbox"/> 6 <input type="checkbox"/> 2 <input type="checkbox"/> 7 <input type="checkbox"/> 3 <input type="checkbox"/> 8 <input type="checkbox"/> 4 <input type="checkbox"/> 9 <input type="checkbox"/> 5 <input type="checkbox"/> 10+ <input type="checkbox"/> BUS	<input type="checkbox"/> Auto <input type="checkbox"/> Bus <input type="checkbox"/> Van <input type="checkbox"/> RV <input type="checkbox"/> Auto & Trailer <input type="checkbox"/> Pick-up <input type="checkbox"/> Motorcycle <input type="checkbox"/> Large Truck <input type="checkbox"/> Truck & 1trlr <input type="checkbox"/> Truck & 2trlr	(write city) <i>State</i>	(write city)	<input type="checkbox"/> Work/business <input type="checkbox"/> Recreational <input type="checkbox"/> Shopping <input type="checkbox"/> Personal <input type="checkbox"/> Medical <input type="checkbox"/> Returning home <input type="checkbox"/> Other	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> Motel/hotel <input type="checkbox"/> Own Home <input type="checkbox"/> Friends <input type="checkbox"/> Camping <input type="checkbox"/> Motorhome <input type="checkbox"/> Other	<input type="checkbox"/> 1 <input type="checkbox"/> 5 <input type="checkbox"/> 2 <input type="checkbox"/> 6 <input type="checkbox"/> 3 <input type="checkbox"/> 7 <input type="checkbox"/> 4 <input type="checkbox"/> 8+ <input type="checkbox"/> Days <input type="checkbox"/> Weeks <input type="checkbox"/> Months	(write city)	<input type="checkbox"/> Yucca Mt. <input type="checkbox"/> Mine Site <input type="checkbox"/> Nev.Test Site <input type="checkbox"/> U.S.Ecology <input type="checkbox"/> Farm <input type="checkbox"/> Retail Store <input type="checkbox"/> Other	<input type="checkbox"/> Hazard mat'l <input type="checkbox"/> Hazard waste <input type="checkbox"/> Produce/food <input type="checkbox"/> Livestock <input type="checkbox"/> Ore/mineral <input type="checkbox"/> Goods/mat'ls <input type="checkbox"/> Other	(write amt)	<input type="checkbox"/> 1 <input type="checkbox"/> 7 <input type="checkbox"/> 13 <input type="checkbox"/> 2 <input type="checkbox"/> 8 <input type="checkbox"/> 14 <input type="checkbox"/> 3 <input type="checkbox"/> 9 <input type="checkbox"/> 15 <input type="checkbox"/> 4 <input type="checkbox"/> 10 <input type="checkbox"/> 16 <input type="checkbox"/> 5 <input type="checkbox"/> 11 <input type="checkbox"/> 17 <input type="checkbox"/> 6 <input type="checkbox"/> 12 <input type="checkbox"/> 18 <input type="checkbox"/> NONE ID#
<input type="checkbox"/> 1 <input type="checkbox"/> 6 <input type="checkbox"/> 2 <input type="checkbox"/> 7 <input type="checkbox"/> 3 <input type="checkbox"/> 8 <input type="checkbox"/> 4 <input type="checkbox"/> 9 <input type="checkbox"/> 5 <input type="checkbox"/> 10+ <input type="checkbox"/> BUS	<input type="checkbox"/> Auto <input type="checkbox"/> Bus <input type="checkbox"/> Van <input type="checkbox"/> RV <input type="checkbox"/> Auto & Trailer <input type="checkbox"/> Pick-up <input type="checkbox"/> Motorcycle <input type="checkbox"/> Large Truck <input type="checkbox"/> Truck & 1trlr <input type="checkbox"/> Truck & 2trlr	(write city) <i>State</i>	(write city)	<input type="checkbox"/> Work/business <input type="checkbox"/> Recreational <input type="checkbox"/> Shopping <input type="checkbox"/> Personal <input type="checkbox"/> Medical <input type="checkbox"/> Returning home <input type="checkbox"/> Other	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> Motel/hotel <input type="checkbox"/> Own Home <input type="checkbox"/> Friends <input type="checkbox"/> Camping <input type="checkbox"/> Motorhome <input type="checkbox"/> Other	<input type="checkbox"/> 1 <input type="checkbox"/> 5 <input type="checkbox"/> 2 <input type="checkbox"/> 6 <input type="checkbox"/> 3 <input type="checkbox"/> 7 <input type="checkbox"/> 4 <input type="checkbox"/> 8+ <input type="checkbox"/> Days <input type="checkbox"/> Weeks <input type="checkbox"/> Months	(write city)	<input type="checkbox"/> Yucca Mt. <input type="checkbox"/> Mine Site <input type="checkbox"/> Nev.Test Site <input type="checkbox"/> U.S.Ecology <input type="checkbox"/> Farm <input type="checkbox"/> Retail Store <input type="checkbox"/> Other	<input type="checkbox"/> Hazard mat'l <input type="checkbox"/> Hazard waste <input type="checkbox"/> Produce/food <input type="checkbox"/> Livestock <input type="checkbox"/> Ore/mineral <input type="checkbox"/> Goods/mat'ls <input type="checkbox"/> Other	(write amt)	<input type="checkbox"/> 1 <input type="checkbox"/> 7 <input type="checkbox"/> 13 <input type="checkbox"/> 2 <input type="checkbox"/> 8 <input type="checkbox"/> 14 <input type="checkbox"/> 3 <input type="checkbox"/> 9 <input type="checkbox"/> 15 <input type="checkbox"/> 4 <input type="checkbox"/> 10 <input type="checkbox"/> 16 <input type="checkbox"/> 5 <input type="checkbox"/> 11 <input type="checkbox"/> 17 <input type="checkbox"/> 6 <input type="checkbox"/> 12 <input type="checkbox"/> 18 <input type="checkbox"/> NONE ID#
<input type="checkbox"/> 1 <input type="checkbox"/> 6 <input type="checkbox"/> 2 <input type="checkbox"/> 7 <input type="checkbox"/> 3 <input type="checkbox"/> 8 <input type="checkbox"/> 4 <input type="checkbox"/> 9 <input type="checkbox"/> 5 <input type="checkbox"/> 10+ <input type="checkbox"/> BUS	<input type="checkbox"/> Auto <input type="checkbox"/> Bus <input type="checkbox"/> Van <input type="checkbox"/> RV <input type="checkbox"/> Auto & Trailer <input type="checkbox"/> Pick-up <input type="checkbox"/> Motorcycle <input type="checkbox"/> Large Truck <input type="checkbox"/> Truck & 1trlr <input type="checkbox"/> Truck & 2trlr	(write city) <i>State</i>	(write city)	<input type="checkbox"/> Work/business <input type="checkbox"/> Recreational <input type="checkbox"/> Shopping <input type="checkbox"/> Personal <input type="checkbox"/> Medical <input type="checkbox"/> Returning home <input type="checkbox"/> Other	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> Motel/hotel <input type="checkbox"/> Own Home <input type="checkbox"/> Friends <input type="checkbox"/> Camping <input type="checkbox"/> Motorhome <input type="checkbox"/> Other	<input type="checkbox"/> 1 <input type="checkbox"/> 5 <input type="checkbox"/> 2 <input type="checkbox"/> 6 <input type="checkbox"/> 3 <input type="checkbox"/> 7 <input type="checkbox"/> 4 <input type="checkbox"/> 8+ <input type="checkbox"/> Days <input type="checkbox"/> Weeks <input type="checkbox"/> Months	(write city)	<input type="checkbox"/> Yucca Mt. <input type="checkbox"/> Mine Site <input type="checkbox"/> Nev.Test Site <input type="checkbox"/> U.S.Ecology <input type="checkbox"/> Farm <input type="checkbox"/> Retail Store <input type="checkbox"/> Other	<input type="checkbox"/> Hazard mat'l <input type="checkbox"/> Hazard waste <input type="checkbox"/> Produce/food <input type="checkbox"/> Livestock <input type="checkbox"/> Ore/mineral <input type="checkbox"/> Goods/mat'ls <input type="checkbox"/> Other	(write amt)	<input type="checkbox"/> 1 <input type="checkbox"/> 7 <input type="checkbox"/> 13 <input type="checkbox"/> 2 <input type="checkbox"/> 8 <input type="checkbox"/> 14 <input type="checkbox"/> 3 <input type="checkbox"/> 9 <input type="checkbox"/> 15 <input type="checkbox"/> 4 <input type="checkbox"/> 10 <input type="checkbox"/> 16 <input type="checkbox"/> 5 <input type="checkbox"/> 11 <input type="checkbox"/> 17 <input type="checkbox"/> 6 <input type="checkbox"/> 12 <input type="checkbox"/> 18 <input type="checkbox"/> NONE ID#

"Thank you very much for your cooperation. Have a nice trip."

ATTACHMENT A